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Remote, but in control:

*Perceptions of Child & Adolescent Mental Health Service
providers to using Telehealth*

Abstract.

There is a growing body of evidence to suggest that for Child and Adolescent Mental Health Services (CAMHS), Telehealth might be superior to some aspects of traditional face to face service provision. Staff willingness to embrace new ways of working is critical to adopting successful technological innovation into practice. This paper describes efforts to articulate Telehealth 'readiness', amongst staff in the North of Scotland. Whilst findings suggest that many participants are comfortable with introducing Telehealth within their clinical areas, it is noted that less than half of the target population responded to the survey. Those who took part also identified potential benefits to using Video Conferencing technology concerning their own professional development and learning needs. We argue that positive attitudes should lead practitioner to engage in a structured programme that addresses knowledge and skills gaps regarding Telehealth.

Introduction:

Children and young people nowadays operate in an advanced digital world where technology offers new and exciting opportunities for remote interactions. Similarly in healthcare services, many more providers experiment with offering services by Video Conferencing (VC) solutions or through web portals and 'apps' that interact with users on-line. These developments entice potential users who may wish or need to access services remotely, without travelling to see a healthcare professional face to face.

To understand the potential impact of remote interaction, on current CAMHS provision, it is important to understand the perceptions, concerns and aspirations of staff who are involved in current service delivery. This paper describes efforts to engage with clinicians and articulate staff 'readiness' to using Telehealth in mental health services.

The paper sets the context to proposed developments, by elaborating on the policy drivers and the models of service delivery used in Scotland. Prior to offering details about the study itself, the paper describes the literature concerning Telepsychiatry and notes the rationale for the study. The results of data analysis are presented by describing values of descriptive statistics and references to qualitative data, which was also gathered. The paper concludes by suggesting that further development of Telehealth in CAMHS should be linked to professional practice and the pursuit of innovative delivery in services.

CAMHS service in Scotland – an overview

As far back as 2003, it was noted that mental health problems in Scotland were on the increase. The report (Public Health Institute for Scotland, 2003) highlighted the situation concerning children and young people and called for immediate action. Four years later, in a report that included an action framework (Scottish

Executive, 2007) it was suggested that “mental health is a key determinant of health, even in childhood” and that children and young people need “age appropriate care, not care based on models of service provision designed for an adult population”. Yet, in 2009 a report by the Mental Welfare Commission suggested that increasing numbers of children suffering mental health problems are being sent to adult or non-specialist hospital wards. This led to claims by the Scottish media that despite specific ministerial pledges, to halve the number of such cases, children in Scotland do not get the healthcare they need (Adams, 2009).

The limited access to age appropriate mental healthcare means that the child or young person is less likely to promptly see a CAMHS specialist or take part in appropriate social or educational activities. The reduced opportunities to benefit from needed interventions, results in less than optimal care and may have a lasting effect on the well being of the child or their family (Hilty et al., 2009). This is especially true for those with high levels of symptoms, disabilities and difficulties in management associated with psychiatric diagnosis - in remote and rural parts of the UK.

The North of Scotland (NoS) is where some of the most challenging geography for healthcare delivery, can be found. This area covers around 40% of the Scottish land but has only 25% of the total Scottish population. The Health Boards that operate within the NoS territory include Tayside, Highland, Grampian, Orkney, Shetland, and the Western Isles. When the study was undertaken, there was just one CAMHS inpatient unit in Dundee, containing six beds. Children and young people who might benefit from the intensive input of a multi professional specialist team, within that single site, had to travel hundreds of miles for prolonged admission periods. Their families had to make a round

trip to Tayside on a regular basis, to have a face to face contact with their child, for a short time, during visiting times.

Whilst the difficulties faced by service users are noted, it is important to point out that the current provision of specialist CAMHS, across the NoS, is also facing considerable challenges. These include retaining and recruiting qualified staff, managing patients' and families' expectations and achieving 'targets', as set by local and national policies. Concentrated effort is being made to increase the provision of in patient capacity for CAMHS in the NoS.

Telehealth and Psychiatry

The term Telehealth, or the often interchangeable term Telemedicine, refers to the remote healthcare related interaction and the exchange of information, images and sound, through communication technologies. It is noted that Telehealth is particularly well suited for mental health as clinicians are very often using audio-visual information to aid the diagnostic and therapeutic process, including assessment and intervention. Factors such as eye contact, posture, facial expressions, body positioning, voice quality and tone, as well as hesitations can be monitored by clinicians remotely via Telehealth, with less need for 'hands-on' procedures or laboratory tests (Norman, 2006).

A recent comprehensive report from Scotland (Millar, 2009) concludes that 'Telepsychiatry' could be an acceptable mode for mental health intervention, with feasibility and acceptability ratings, by both clinicians and service users being high across global settings (Wooton et al., 2003). Pakyurek et al (2010) claimed that Telemedicine was especially beneficial for mental

health provision amongst the younger age group. Indeed Mitchell et al (2009) found that the specialty that has made most use of Telehealth, amongst the range of specialist children's services, at Yorkhill hospital in Glasgow, is Child & Adolescent Psychiatry.

However, a report by the Royal Society (The Royal Society, 2006) suggested that staff have a key role in the success or otherwise of new, innovative and technology enhanced healthcare service. This, through their action and reaction to change and the way they embrace or reject new services. Werner (2004) also affirmed that understanding staff attitudes as well as feeling of uneasiness and anxiety regarding technology, was key to encouraging the use of Telehealth for psychiatric care.

To identify perceptions and articulate views of both current and potential CAMHS Telehealth users, in the NoS, we conducted a survey that was set to capture data regarding the technology, its clinical use and perceived usefulness. As patient data was not collected we did not obtain Ethics Approval but rather ensured that our contact with staff was approved and supported by senior management within the localities.

Design - Methods

The survey tool used was an adapted version of a staff survey template freely available on the Scottish Centre for Telehealth and Telecare website¹. It was decided to use both, an electronic

¹ <http://www.sct.scot.nhs.uk/docs/staffopinion.doc>

survey via an on-line tool (Survey Monkey²) and a paper based questionnaire, to enable those with limited access to computers to take part in the study. The questionnaire included set questions and an additional 'comment' space, to capture qualitative data.

Participants were asked to note their Health Board area and whether they had used Video Conferencing as part of their practice. There were also questions about their level of confidence in introducing Video Consultation to their services and their views about the benefits of using Telehealth for clinical and professional purposes. Other questions were focused on the infrastructure and availability of the technology and the level of support and training they had received.

To ensure face validity, the adopted tool was critiqued by a group of CAMHS experts, piloted by another small group of service providers and then distributed widely amongst the target population. The chosen route for survey distribution was by e-mail, and this was achieved by contacting service managers and requesting them to cascade the e-mail invitation amongst their staff. Participants had a number of options to complete the survey:

- On-line, using the web tool – following a web link noted in the text of the e-mail
- Electronically, returning the Word document that was attached to the e-mail once their input was saved - or
- Manually, completing the paper survey that they printed or the hard copy received from their manager and sending back by post.

²<http://www.surveymonkey.com/>

The survey was 'live' for a period of one month and a reminder was sent to the regional managers two weeks after go-live date, asking them to encourage staff to complete the survey. At the end of the study period 61 responses were received with over half (n=35) sent via Survey Monkey, 12 were sent as hand written replies and 14 as a MS Word attachment to an e-mail.

A descriptive statistical analysis for quantitative data was used and the qualitative responses were carefully examined to identify trends and common threads within the data. Considering the 2009 workforce 'head count' information, published by the information services division at the Scottish government³, we claim to receive responses from 45% (61/136) of our target population (Medical, Nursing and Psychology CAMHS staff) in the NoS. This figure needs to be noted when considering the results and the applicability to the wider population of CAMHS staff.

Finding - Results

It was found that the majority (69%) of participants had used Video Conferencing and thus were able to offer an informed view on remote interaction. The technology was used for administration purposes (meetings etc) (76%), clinical use (62%), education (training or supervision) (55%) and therapy (24%). Regardless of whether participants used the technology or not, they were asked

³ www.isdscotland.org/isd/5379.html

to comment on 'how comfortable they were with introducing Telemedicine'. Interestingly, most participants would be comfortable with introducing such a facility to their service.

The majority (83%) believed Telemedicine could improve local access to clinicians or could be used for advice and support when required. Almost all (98%) agreed that Telemedicine may reduce travel time and costs for patients, parents and clinicians. When asked whether Telemedicine would result in reduced 'time off work' for carers and 'time off school' for children, 61% agreed with this assertion. However, less than half (48%) felt Telemedicine would be a useful tool to maintain family contact with patients and only 20% agreed that Telemedicine would result in a reduced need for arranging siblings/dependent care.

When considering their own professional needs, 76% of staff anticipated that Telemedicine would support an increased access to education. When asked if Telemedicine could be used to alleviate staff isolation 61% thought it would whilst 80% believed Telemedicine could improve access to professional networks.

The qualitative analysis of comments, offered by participants, provided a different perspective and a unique insight into the experiences and perceptions held by staff. Three interrelated core themes which participants commented on were identified:

Rationale and justification for using Telehealth:

Many comments suggested that cost savings is the main reason for introducing Telehealth and that such development would be a way to reducing or replacing current CAMHS provision. Staff

argued that technology should only have a complementary role in enhancing services. They raised concerns that the quality of the service they offered may be compromised if technology was used to substitute for face to face interaction.

For some staff the introduction of a new 'technology enabled service' was perceived as adding an extra 'burden' to their already heavy workload. They argued that whilst 'management' may see Telehealth as a way to maximise efficiency, it will only increase patients' expectations and affect practitioners who are already working 'to capacity'. Even when Telehealth was considered as a solution to support professional development and combat 'isolation', management was still 'blamed' for seeking to drive costs down. It was the 'relationships' with peers that isolated practitioners needed, which was best achieved through a face to face encounter.

Some practitioners voiced strong concerns that Telehealth may put patients, and by default themselves, at risk. The underlining assumption was that using Telehealth may be detrimental to their ethical and moral code to 'do no harm' and may also affect core legal and professional requirements to keep information safe, secure and confidential.

However, the unique geography and the vulnerability to changes in the weather, with a direct impact on the provision of care, were noted by the majority of participants. This resulted in an overall sense that participants would resign themselves to using Telehealth if the technology was robust and reliable and if there were clear benefits to the patients, their families and to the service itself.

Technical issues and effects on clinical practice:

Many participants mentioned their frustration when faced with technical difficulties, which could be due to the local set-up, regional infrastructure settings or user competency with operating the 'machinery'.

"I think telemedicine works very well if the lines used by all centres are good enough. I have had experience of being in meeting/ training with interrupted ... audio or video transmission or delayed start due to technical problems. All these difficulties make usefulness of telemedicine questionable".

There were a number of personal and professional concerns which participants noted in relation to using the technology. Many adopted the role of the 'patient advocate' as a powerful vehicle to voice these concerns: "young people may be inhibited in front of a camera" "It can be stressful for patients to use unfamiliar technology". Yet, others suggested that "(Telehealth could be)...good for young people who may find attending a clinic sometimes uncomfortable".

Participants also wanted to share lessons learned regarding the effective use of Telemedicine and the impact it has had on their practice and on specific client groups. Many requested more 'kit and better technical support'.

Therapeutic interaction:

Many comments highlighted the perceived deficiency of Telehealth in picking up and showing what participants described as ‘non verbal cues’. Indeed, the majority of staff indicated they would prefer to see their patients face-to-face, with some arguing that the technology could be perceived as an ‘intruder’. The screen was seen as a physical barrier between service users and providers, hindering initial efforts to build a purposeful therapeutic interaction. There were some concerns that new ways of working would result in practitioners ‘dragging’ patients into locations where VC was available, rather than continuing to have consultations “in schools or at home – where the patient may be more comfortable”.

Discussion

The results presented here referred to a relatively small sample of CAMHS providers who were willing to share their views, with the majority of staff (55%) choosing not to take part in the study. This observation maybe interpreted in a number of ways:

It could be that Telehealth is a term that is perceived as having little relevance to CAMHS or as a futuristic technology that has not yet reached the ‘clinical horizon’ of most practitioners. This knowledge gap may have affected staff who felt ill equipped to contribute to the survey. It could also be that the method we used to cascade the survey, via service managers, did not entice users to take part in the study. Indeed, the comments about managers using Telehealth as a means to reducing costs suggest there are inherent tensions concerning efficiency pursuits across the service. Using managers to distribute invites to participate in the survey may have acted as a deterrent for some staff who opted not to take part. Finally, a survey fatigue amongst staff, or a sense

of indifference to 'yet another debate' about new ways of delivering services in the NoS, could also explain why many chose not to participate in our study.

Those who did complete the survey could be said to be more interested and possibly better informed about Telehealth. They were able to identify clear potential benefits to using it for efficiency savings and for more responsive and more convenient services provision. They also noted Telehealth as a real opportunity for the pursuit of personal and professional development, delivered at a distance. Most interesting was the finding that the great majority of participants would be willing to introduce Telehealth within their service.

It may be, however, that the choice of wording to describe reaction to Telehealth implementation, led to a possible biased result. We have used the term 'comfortable' to associate with willingness to introduce Telehealth into CAMHS, and this may have been incorrect. On the other hand, it may be that the reality of working in remote and rural areas, where unpredicted environmental conditions impact on service delivery, make practitioners adopt a pragmatic approach, where they are comfortable with trying out new ways of working.

The overall results indicate that participants have positive views regarding the potential impact of Telehealth on their services as well as on their professional practice. Yet, it was clear that participants see a gap between their aspirations or reaction to articulated vision and their 'lived experienced'. This was especially apparent when asked about current technology and support provision.

Many participants noted a somewhat fraught 'history' of being 'let down' by technology, or being faced with poor audio or distorted vision, when Telehealth was used. That said, it is important to consider users' technical competency, as a contributing factor to what they coined 'technical failure'. It is conceivable that the technology is 'blamed' when inexperienced users face difficulties in operating the equipment or follow written guidance, set to resolve 'minor' technical problems.

The results highlight a fundamental question that should be examined when considering the design of future CAMHS delivery in the NoS: Should all clinical staff be expected to learn more about Telehealth and be obliged to accept more responsibility for 'operating' it? Considering the current political drive to see more and better Telehealth services, especially in remote and rural location, the answer it seems is YES.

Conclusion

Our study examined the readiness of CAMHS staff to using Telehealth within their clinical services in one Scottish geographical cluster. We found that those who were interested in the subject and completed our survey had positive attitudes towards the vision of a technology enabled service, which offers remote interaction with service users and peers. We also noted that the majority of our target population opted not to participate in the study and that many of those who have used VC, experienced a few problems at some of the interaction they had with it.

We argued that positive attitudes and staff readiness are key influencing factors to successful implementation of technical innovation in healthcare environment. Whilst our study found that

many staff members are willing to exploit technology as a way of enhancing service delivery, they also need better skills and knowledge about using Telehealth effectively.

There are a number of options to address the knowledge gap we found amongst clinical staff. More training should be provided to users and Telehealth should be included within core clinical training and education programmes. Technical support, on site, should not be limited to day time working hours but should be reserved to resolving critical issues, which requires technical expertise. Staff should have the capacity to act as innovative users and harness the potential benefits that Telehealth offer.

Most importantly, efforts to capture the enthusiasm of staff and dispel any myths and misconceptions, regarding Telehealth, should not be limited to one clinical speciality or geographical area. We argue that such effort needs to be led through a national campaign that target both health and social care staff across Scotland.

We believe our study could assist in grounding the rationale for a national effort to further deploy Telehealth solution and bridge the barrier of distance in the provision of optimal care.

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